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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,230	03/17/2004	Richard M. Hawes	MS1-1840US	5635

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EXAMINER
MIRZADEGAN, SAEED S

ART UNIT	PAPER NUMBER
2144	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/803,230	HAWES, RICHARD M.
	Examiner	Art Unit	
	Saeed S. Mirzadegan	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 March 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau.(PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *3/17/2004*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20071226

DETAILED ACTION

Drawings

1.   The drawings are objected to because Fig. 2, depicts "repeater module 262" as

the recipient of the availability information from "message queue 254" via "path 248",

however the disclosure recites "The initial server module A 202 also uses the repeater

module 256 to transfer the availability information to the respective message queues

(260, ...) of the other server modules (204, 206, ... 208) via the message queue 254.

Fig. 2 represents this information transfer by paths 248." Fig. 3 is objected to as well

since it depicts "Merge Logic 264" sending the reply to "Sync Module 250" and "Server

Module A 202" sending the inquiry to "Server Module n 208". The sources and

destinations of the inquiries and replies are not consistent amongst the depicted

modules. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in

reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2.   The disclosure is objected to because of the following informalities: There are many instances in the disclosure such as page 12, line 23 which recite "(236, ... 238)" where it should read "(236, 238, ...)" as well as instances such as page 19, line 2 which recite "(230, 232, 234)" where it should read "(230, 232, ..., 234)". Appropriate correction is required.

3.   The disclosure is objected to because of the following informalities: page 18, line 16-19 recites "The initial server module A 202 also uses the repeater module 256 to transfer the availability information to the respective message queues (260, ...) of the other server modules (204, 206, ... 208) via the message queue 254. Fig. 2 represents this information transfer by paths 248." This is contradictory to the depictions in Fig. 2. Appropriate correction is required.

4.   The disclosure is objected to because of the following informalities: Page 18, lines 20-22 recite "Server module B 204 illustrates the role of the repeater module 262 in the context of a server module that receives availability information from the initial repeater module A 202". This is contrary to Fig. 2. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

6.   Claims 7, 8, 11, 15, 17, 21, 22, 28, 30 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

7.   Claims 7, 15, 17, 21, 28, 30 recite the limitation "a computer readable medium"

on page 33, line 9; page, 34, line 20; page 35, line 6; page 36, line 5; page 37, line 14;

page 38, line 4. There is insufficient antecedent basis for this limitation in the claims as

per 37 cfr 1.75(d)(1) and MPEP 608.01(o).

8.   Claims 8 & 22 recite the limitation "first status" on page 33, line 14 & page 36,

line 11. There is insufficient antecedent basis for this limitation in the claims.

9.   Insofar as best understood, the claims are rejected over prior art as follows. For

the sake of applying the closest prior art below, the term (or limitation) "first status" is

being interpreted as meaning "a first status". If the applicant agrees with this

interpretation they are invited to amend the claims to positively recite, "a first status" or if

the applicant disagrees, the applicant should present an alternate interpretation with

clear arguments.

10.   Claim 8 further recites the limitation "second status" on page 33, line 16. There

is insufficient antecedent basis for this limitation in the claim.

11.   Insofar as best understood, the claims are rejected over prior art as follows. For

the sake of applying the closest prior art below, the term (or limitation) "second status" is

being interpreted as meaning "a second status". If the applicant agrees with this

interpretation they are invited to amend the claims to positively recite, "a second status"

or if the applicant disagrees, the applicant should present an alternate interpretation

with clear arguments.

12.   Regarding claim 11, the phrase (or limitation) "some time" renders the claim

indefinite. The term "some time" is not defined by the claim, the specification does not

provide a standard for ascertaining the requisite degree, and one of ordinary skill in the

art would not be reasonably appraised of the scope of the invention. Having remained

inactive has been rendered indefinite by use of the aforementioned term. Given the

indefinite nature of this claim, the examiner reasonably understands "after having

remained inactive for some time" to mean "after being inactive".

Claim Rejections - 35 USC § 101

13.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
conditions and requirements of this title.

14.   Claims 1-6, 18-20, 22-27, 29 are rejected under 35 U.S.C. 101 because The

Claimed Invention is directed to a judicial exception to 35 U.S.C. 101 (Natural

Phenomenon) and is not directed to a practical application of such judicial exception

since the invention as claimed does not produce a tangible result as set forth in MPEP

2106.

15.   Page 6, line 11, recites, "any of the functions described herein can be

implemented using software, ..." As it is written, claims 18-20, 22-27 & 29 claim nothing

but software.

16.   In order for software claims to be statutory, they must be claimed in combination

with an appropriate medium and/or hardware to establish statutory category of invention

and enable any functionality to be realized as set forth in MPEP 2106.01.

Software, *per se*:

The claims lack the necessary physical articles or objects to constitute a machine or a
manufacture within the meaning of 35 USC 101. They are clearly not a series of steps
or acts to be a process nor are they a combination of chemical compounds to be a
composition of matter. As such, they fail to fall within a statutory category. They are, at
best, functional descriptive material *per se*.

Descriptive material can be characterized as either "functional descriptive material" or
"nonfunctional descriptive material." Both types of "descriptive material" are nonstatu-
tory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759.
When functional descriptive material is recorded on some computer-readable medium, it
becomes structurally and functionally interrelated to the medium and will be statutory in
most cases since use of technology permits the function of the descriptive material to be
realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed.
Cir. 1994)

Merely claiming <u>non</u>functional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because "the sole practical application of the algorithm was in connection with the programming of a general purpose computer.").

Claim Rejections - 35 USC § 102

17.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 35.1(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

18.   Claims 1-7, 16-18, 20, 21, 29, 30 are rejected under 35 U.S.C. 102(e) as being

anticipated by Colrain et al. (Colrain) US. Pat. No. 7069317.

19.   Regarding Claim 1, Colrain discloses receiving notification information at a first

server module regarding a change in the system (see e.g. col. 11, lines 20-22); acting

on the notification information in the first server module (see e.g. col. 11, lines 24-26);

and propagating the notification information from the first server module to at least a

second server module (see e.g. col. 12, lines 27-33), wherein the notification

information comprises an indication of whether or not at least one application used by

the system is available to service user requests (see e.g. col. 11, line 20).

20.   Regarding Claim 2, Colrain further discloses uploading the notification

information into at least one application store associated with at least one respective

application provided by the first server module (see e.g. col. 11, lines 13-15).

21.   Regarding Claim 3, Colrain further discloses transferring the notification

information using a first queue provided by the first server module to a second queue

provided by the second server module (see e.g. Fig. 13, computer device 1302 & 1304

containing queues for notification storage).

22.   Regarding Claim 4, Colrain further discloses acting on the notification information

in the second server module (see e.g. col. 12, lines 53-55).

23.   Regarding Claim 5, Colrain further discloses uploading the notification

information into at least one application store associated with at least one respective

application provided by the second server module (see e.g. col. 3, lines 44-47, per

server).

24.   Regarding Claim 6, Colrain discloses repeating the propagating for at least one

additional server module in the system (Fig. 1, elements 11a, 11b, 11c, 11d, additional

server).

25.   Regarding Claim 7, all the limitations of claim 7 have already been addressed

above in the method form as opposed to the computer readable medium form.

26.   Regarding Claim 16, Colrain discloses receiving, at a server module in the

system, a user's request for an application (see e.g. col. 2, lines 19-20, client

requesting additional service & Table 2, connection request); consulting an application

store associated with the application to determine whether the application is

unavailable (see e.g. Fig. 2, element 34 & col. 6, lines 42-44), and, if so generating a

response (see e.g. col. 6, lines 51-52, notifications); and forwarding the response to the

user (see e.g. col. 6, lines 56-59, notifications provided to the user via user interface),

wherein each of the plural server modules in the system maintains its own respective

application store (see e.g. col. 3, lines 44-47, per server).

27.   Claim 17, lists all the same elements of claim 16, but in computer readable

medium form rather than method form. Therefore, the supporting rationale of the

rejection to claim 16 applies equally as well to claim 17.

28.   Regarding Claim 18, Colrain discloses receive notification information pertaining

to a change in the system (see e.g. col. 11, lines 20-22); upload the notification

information into at least one application store associated with at least one respective

application (see e.g. col. 11, lines 24-26); and propagate the notification information

from the first server module to at least a second server module (see e.g. col. 12, lines

27-33), wherein the notification information uploaded to said at least one application store comprises an indication of whether or not said at least one application is available to service user requests (see e.g. col. 11, line 20).

29.   Regarding Claim 20, Colrain discloses propagating the notification information to at least one other server module in the system. (see e.g. col. 12, lines 27-33)

30.   Regarding Claim 21, all the limitations of claim 21 have already been addressed above in the synchronization module form as opposed to the computer readable medium form.

31.   Regarding Claim 29, Colrain discloses an application store associated with the application (see e.g. col. 11, lines 24-26); receiving, at a first server module in the system, a user's request for an application (see e.g. col. 2, lines 19-20, client requesting additional service & Table 2, connection request); consulting the application store to determine whether the application is unavailable (see e.g. Fig. 2, element 34 & col. 6, lines 42-44), and, if so, to generate a response (see e.g. col. 6, lines 51-52, notifications); and forwarding the response to the user (see e.g. col. 6, lines 56-59, notifications provided to the user via user interface), wherein each of the plural server modules in the system maintains its own respective application store (see e.g. col. 3, lines 44-47, per server).

32. Regarding Claim 30, all the limitations of claim 30 have already been addressed

above in a server module form as opposed to the computer readable medium form.

Claim Rejections - 35 USC § 103

33. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness

under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

34. Claims 8-15, 19, 22-28 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Colrain in view of Shirvastava et. al. (Shirvastava) US Pat. No.

6163855.

35. Regarding Claim 8, Colrain discloses forwarding first status information reflecting

a state in a first server module to a second server module (see e.g. col. 12, lines 27-33);

and acting on the merged information at the first server module (see e.g. col. 11, lines

24-26). However, Colrain does not explicitly teach: merging the first status information with second status information, where the second status information reflects a state of the second server module, to produce merged information; sending the merged information from the second server module to the first server module.

36.   In the same field of endeavor, shirvastava teaches, (col. 7, lines 13-25).

37.   It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Shirvastava's teachings of merging status messages and transmitting them to every node with the teachings of Colrain, for the purpose of (see Shirvastava, col. 2, lines 14-16). Colrain provides motivation to do so, by providing a system and method for communicating service change events in a cluster framework environment (see Colrain, col.4, lines 52-54).

38.   Regarding Claim 9, Colrain and Shirvastava disclose the invention substantially as claimed. Colrain further discloses the first status information includes notification information regarding a change in the system (see e.g. col. 11, lines 20-22). However, Colrain does not explicitly teach: the second status information includes notification information regarding a change in the system.

39.   In the same field of endeavor, shirvastava teaches, (col. 11, lines 13-25).

40.   It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Shirvastava's teachings of the second status information including notification information regarding a change in the system with the teachings of Colrain, for the purpose of (see Shirvastava, col. 2, lines 14-16). Colrain provides motivation to do so, by providing a system and method for communicating service change events in a cluster framework environment (see Colrain, col.4, lines 52-54).

41.   Regarding Claim 10, Colrain and Shirvastava disclose the invention substantially as claimed. Colrain further discloses the notification information comprises an indication of whether or not at least one application used by the system is available to service user requests (see e.g. col. 11, line 20).

42.   Regarding Claim 11, Colrain and Shirvastava disclose the invention substantially as claimed. Colrain further discloses the forwarding of first status information is prompted by the first server module becoming active after having remained inactive for some time (see e.g. Table 1).

43.   Regarding Claim 13, Colrain and Shirvastava disclose the invention substantially as claimed. Colrain further discloses uploading the information into at least one application store associated with at least one respective application provided by the first

server module (see e.g. col. 11, lines 13-15). However, Colrain does not explicitly teach: merging the information.

44.   In the same field of endeavor, shirvastava teaches, (col. 7, lines 13-25).

45.   It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Shirvastava's teachings of merging status messages and transmitting them to every node with the teachings of Colrain, for the purpose of (see Shirvastava, col. 2, lines 14-16). Colrain provides motivation to do so, by providing a system and method for communicating service change events in a cluster framework environment (see Colrain, col.4, lines 52-54).

46.   Regarding Claim 14, Colrain and Shirvastava disclose the invention substantially as claimed. Colrain further discloses repeating the forwarding, merging, sending and acting for at least one other server module. (Fig. 1, elements 11a, 11b, 11c, 11d, multiple servers).

47.   Regarding Claim 15, all the limitations of claim 15 have already been addressed above in the method form as opposed to the computer readable medium form.

48.   Regarding Claim 19, Colrain discloses the invention substantially as claimed. However Colrain does not explicitly disclose receiving the notification information and propagate the notification information using the message queue.

49.   In the same field of endeavor, shirvastava teaches, (col. 10, line 67 & col. 11, lines 1-2).

50.   It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Shirvastava's teachings of queue usage with the teachings of Colrain, for the purpose of (see Shirvastava, col. 2, lines 14-16). Colrain provides motivation to do so, by providing a system and method for communicating service change events in a cluster framework environment (see Colrain, col.4, lines 52-54).

51.   Regarding Claim 22, Colrain discloses forwarding first status information reflecting a state in a first server module to a second server module (see e.g. col. 12, lines 27-33); and acting on the merged information(see e.g. col. 11, lines 24-26). However, Colrain does not explicitly teach: receive merged information from the second server module, wherein the merged information reflects a merging of the first status information with second status information, the second status information reflecting a state of the second server module.

52.   In the same field of endeavor, shirvastava teaches, (col. 11, lines 13-25).

53.   It would have been obvious to one of ordinary skill in the networking art at the
time the applicant's invention was made to combine Shirvastava's teachings of merging
status messages and transmitting them to every node with the teachings of Colrain, for
the purpose of (see Shirvastava, col. 2, lines 14-16). Colrain provides motivation to do
so, by providing a system and method for communicating service change events in a
cluster framework environment (see Colrain, col.4, lines 52-54).

54.   Regarding Claim 23, the same motivation utilized in the combination of claim 9,
equally applies as well to claim 23.

55.   Regarding Claim 24, the same motivation utilized in the combination of claim 10,
equally applies as well to claim 24.

56.   Regarding Claim 25, the same motivation utilized in the combination of claim 11,
equally applies as well to claim 25.

57.   Regarding Claim 26, the same motivation utilized in the combination of claim 13,
equally applies as well to claim 26.

58.   Regarding Claim 27, the same motivation utilized in the combination of claim 14,
equally applies as well to claim 27.

59.   Regarding Claim 28, all the limitations of claim 28 have already been addressed

above in the synchronization module form as opposed to the computer readable

medium form.

Claim Rejections - 35 USC § 103

60.   Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Colrain

in view of Shirvastava as applied to claim 8 above and in further view of Sjolander et al.

(Sjolander), US Pat. No. 6587959.

61.   Regarding Claim 12, Colrain discloses the invention substantially as claimed.

However Colrain does not explicitly teach: provide a non-duplicative union of the first

status information and the second status information

62.   In the same field of endeavor, Sjolander teaches, (Fig. 6, col. 5, lines 24-31)

preventing the creation of a duplicate message by adding a unique tag to the message.

63.   It would have been obvious to one of ordinary skill in the networking art at the

time the applicant's invention was made to combine Sjolander's teachings as discussed

above with the teachings of Colrain, for the purpose of (see Sjolander, col. 5, lines 56-

62, bandwidth conservation in a server cluster environment). Colrain provides

motivation to do so, by providing a system and method for communicating service

change events in a cluster framework environment (see Colrain, col.4, lines 52-54).
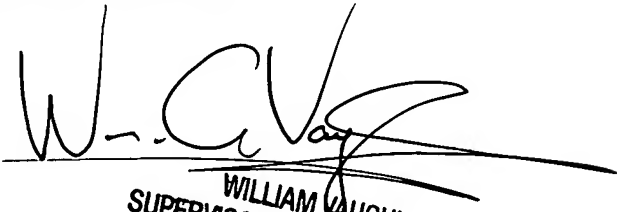
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to form PTO-892 (Notice of Reference Cited) for a list of relevant prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saeed S. Mirzadegan whose telephone number is 571-270-3044. The examiner can normally be reached on M-F 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

sm

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